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**CERTIFICATE OF MAILING BY EXPRESS MAIL**

I hereby certify that, on the date shown below, this correspondence is being deposited with the United States Postal Service as Express Mail No. EV191491463US, in an envelope addressed to the Mail Stop Patent Application, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

Date: August 5, 2003

  
\_\_\_\_\_  
John J. Prizzi

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re: Application of:	)	
RONALD M. PENICH et al.	)	Group Art Unit
	)	
Serial No. (to be assigned)	)	
	)	Examiner To be assigned
Filed: August 5, 2003	)	
	)	
For: NANOLAYERED COATED	)	Attorney Docket K-1782D
CUTTING TOOL AND METHOD	)	
FOR MAKING THE SAME	)	

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August 5, 2003

Mail Stop Patent Application  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Applicant(s) submit herewith a PTO-1449 listing patents, publications or other information, of which they are aware and that they believe may be material to the examination of this application, and in respect of which, there may be a duty to disclose. The Information Disclosure Statement submitted herewith is being filed:

- ☒ under 37 CFR 1.97(b); within three (3) months of the filing of a national application; within three (3) months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing date of a first Office Action on the merits; or before the mailing of a first office action after the filing of a request for continued examination under § 1.114, whichever event occurs last.
- ☐ under 37 CFR 1.97(c); after three (3) months of the filing of a national application, or the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; or after the mailing date of a first Office Action on the merits, whichever occurred last but before the mailing date of either a Final Action under 37 CFR 1.113, or a Notice of Allowance under 37 CFR 1.311, whichever occurs first. Also submitted herewith is:

- ☐ a statement as specified in 37 CFR 1.97(e); or
- ☐ the fee of \$180.00 set forth in 37 CFR 1.17(p) for submission of an Information Disclosure Statement under 37 CFR 1.97(c) to be paid as provided below.
- ☐ under 37 CFR 1.97(d); after a Final Action under Section 1.113, or a Notice of Allowance under Section 1.311, whichever occurs first, but before, or simultaneously with, the payment of the issue fee. Submitted herewith is a statement as specified in 37 CFR 1.97(e) and the fee of \$180.00 set forth in 37 CFR 1.17(p) to be paid as provided below.

**STATEMENT UNDER 37 CFR 1.97(e)**

- ☐ This is a statement under the provisions of 37 CFR 1.97(e) in the above-identified application.
- ☐ Statement Under 37 CFR 1.97(e)(1) - Each item of information contained in the accompanying information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three (3) months prior to the filing of the information disclosure statement.
- ☐ Statement Under 37 CFR 1.97(e)(2) - No item of information contained in the accompanying information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned person, after making reasonable inquiry, no item of information contained in the accompanying information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement.

**PRIOR APPLICATIONS**

- ☒ This application relies, under 35 U.S.C. 120, on the earlier filing date of prior application(s):

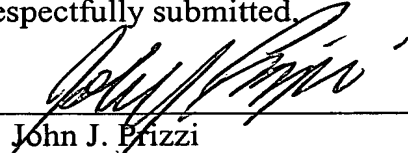
Serial No. 10/097,487, filed on March 14, 2002.

Those references listed on the attached form and not submitted herewith were submitted to, and/or cited by, the Office in the prior application(s) identified above and therefore, are not required to be provided in this application.

**FEES**

- ☐ A check in the amount of \_\_\_\_\_ is attached.
- ☒ The Assistant Commissioner is hereby authorized to charge any fees that may be required by this submission and to credit Deposit Account No. 11-0508 any overpayment. A duplicate copy of this sheet is enclosed.

Respectfully submitted,



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Attorney for Applicant(s)  
Reg. No. 29,970  
Date: August 5, 2003

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FORM PTO-1449 (Modified)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. K-1782 D		SERIAL NO. (to be assigned)								
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use several sheets if necessary) (37 CFR 1.98(b))				APPLICANT RONALD M. PENICH et al.										
				FILING DATE August 5, 2003		GROUP (to be assigned)								
<b>U.S. PATENT DOCUMENTS</b>														
EXAMINER INITIAL		PATENT NUMBER						ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE		
		4	5	4	0	5	9	6	9/85	Nimmagadda	427	37		
		4	5	5	4	2	0	1	11/85	Andreev et al.	428	215		
		4	5	9	9	2	8	1	7/86	Schintlmeister et al.	428	699		
		4	6	4	3	9	5	1	2/87	Keem et al.	428	469		
		4	6	8	6	1	5	6	8/87	Baldoni II et al.	428	698		
		4	7	1	4	6	6	0	12/87	Gates, Jr.	428	698		
		4	7	5	3	8	5	4	6/88	Gavrilov et al.	428	698		
		4	7	7	6	8	6	3	10/88	Van den Berg et al.	51	295		
		4	8	3	5	0	6	2	5/89	Holleck	428	469		
		4	8	4	2	7	1	0	6/89	Freller et al.	204	192.38		
		4	8	9	5	7	7	0	1/90	Schintlmeister et al.	428	552		
<b>FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION</b>														
		DOCUMENT NUMBER						PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLASS	SUBCLASS	TRANSLATION		
		0	5	9	2	9	8	6	7/98	Europe			YES	NO
		0	7	0	9	4	8	3	5/96	Europe			X	
		9	8	4	4	1	6	3	10/98	PCT			X	
		3	5	3	2	7	3	3	6/86	Germany				X
		0	4	4	6	3	7	5	11/85	Europe			X	
<b>OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)</b>														
		H. Curtins, PLATIT: a new industrial approach to cathodic arc coating technology, Surface and Coatings Technology 76-77 (1995) pp. 632-639												
		S. Kadiac and J. Muell, Sputtering systems with magnetically enhanced ionization for ion plating of TiN films, J. Vac. Sci. Technol. A 8 (3), May/June 1990 pp. 1318-1324												
		Hsieh et al. Deposition and characterization of TiAlN and multi-layered TiN/TiAlN coatings using unbalanced magnetron sputtering, Surface and Coatings Technology (1998) pp.132-137												
		Anderson et al., Deposition, microstructure and mechanical and tribological properties of magnetron sputtered TiN/TiAlN multilayers, Surface and Coatings Technology (2000) pp. 219-226												
		Akari et al., Reduction in Macroparticles during the deposition of TiN films prepared by arc ion plating, Surface and Coatings Technology 43/44(1990) pp. 312-323												
EXAMINER									DATE CONSIDERED					
EXAMINER: Initial citation considered. Draw in through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.														

FORM PTO-1449 (Modified)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE				ATTY. DOCKET NO. K-1782 D			SERIAL NO. (to be assigned)						
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use several sheets if necessary) (37 CFR 1.98(b))						APPLICANT RONALD M. PENICH et al.									
						FILING DATE August 5, 2003			GROUP (to be assigned)						
<b>U.S. PATENT DOCUMENTS</b>															
EXAMINER INITIAL		PATENT NUMBER							ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE		
		4	9	8	4	9	4	0	1/91	Bryant et al.	407	119			
		5	0	7	1	6	9	3	12/91	Sue et al.	428	212			
		5	0	7	5	1	8	1	12/91	Quinto et al.	428	698			
		5	2	0	8	1	0	2	5/93	Schulz et al.	428	336			
		5	2	5	2	3	6	0	10/93	Huttl et al.	427	255.2			
		5	2	6	6	3	8	9	11/93	Omori et al.	428	216			
		5	3	2	8	8	7	5	7/94	Euda et al.	501	87			
		5	3	3	0	8	5	3	7/94	Hofmann et al.	428	697			
		5	3	6	8	9	3	9	11/94	Kawamura et al.	428	408			
		5	4	7	8	6	3	4	12/95	Setoyama et al.	428	216			
		5	5	0	3	9	1	2	4/96	Setoyama et al.	428	216			
<b>FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION</b>															
		DOCUMENT NUMBER							PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLASS	SUBCLASS	TRANSLATION		
		0	7	0	1	9	8	2	3/96	Europe				YES	NO
		0	5	9	2	9	8	6	4/94	Europe				X	
<b>OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)</b>															
		McCandlish et al., Processing and Properties of Nanostructured WC-Co, Nanostructured Materials Vol. 1, (1992) pp. 119-124													
		Subramanian et al., Review of multicomponent and multiplayer coatings for tribological applications, Wear, 165 (1993) pp. 85-95													
		Chu, Deposition and properties of polycrystalline TiN/NbN superlattice coatings, J. Vac. Sci. Technol. A 10(4), Jul/Aug 1992 pp 1604-1609													
		Holleck, Designing Advanced Coatings For Wear Protection, Surface Engineering 1991 Vol. 7 No. 2 pp. 137-144													
		Holleck et al., Preparation And Behaviour of Wear-Resistant TiC/TiB <sub>2</sub> , TiN/TiB <sub>2</sub> And TiC/TiN Coatings with High Amounts of Phase Boundaries, Surface and Coatings Technology, 35 (1988) pp. 707-714													
EXAMINER										DATE CONSIDERED					
EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.															

<b>FORM PTO-1449</b> (Modified)		<b>U.S. DEPARTMENT OF COMMERCE</b> <b>PATENT AND TRADEMARK OFFICE</b>			<b>ATTY. DOCKET NO.</b> K-1782D		<b>SERIAL NO.</b> (to be assigned)						
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use several sheets if necessary) (37 CFR 1.98(b))					<b>APPLICANT</b> RONALD M. PENICH et al.								
					<b>FILING DATE</b> August 5, 2003		<b>GROUP</b> (to be assigned)						
<b>U.S. PATENT DOCUMENTS</b>													
<b>EXAMINER INITIAL</b>		<b>PATENT NUMBER</b>				<b>ISSUE DATE</b>	<b>PATENTEE</b>	<b>CLASS</b>	<b>SUBCLASS</b>	<b>FILING DATE IF APPROPRIATE</b>			
		5	5	4	9	9	7	5	8/96	Schulz et al.	428	553	
		5	5	8	8	9	7	5	12/96	Hammond et al.	51	293	
		5	6	5	6	3	8	3	8/97	Tanaka et al.	428	627	
		5	6	7	9	4	4	8	10/97	Kawata	428	216	
		5	7	0	0	5	5	1	12/97	Kukino et al.	428	212	
		5	7	1	2	0	3	0	1/98	Goto et al.	428	332	
		5	7	8	3	2	9	5	7/98	Barnett et al.	428	216	
		5	8	3	3	0	2	1	11/98	Mensa-Wilmot et al.	175	433	
		5	8	5	3	8	7	3	12/98	Kukino et al.	428	336	
		5	8	8	2	7	7	7	3/99	Kukino et al.	428	216	
		5	8	8	2	7	7	8	3/99	Sugizaki et al.	428	216	
<b>FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION</b>													
		<b>DOCUMENT NUMBER</b>				<b>PUBLICATION DATE</b>	<b>COUNTRY OR PATENT OFFICE</b>	<b>CLASS</b>	<b>SUBCLASS</b>	<b>TRANSLATION</b>			
											<b>YES</b>	<b>NO</b>	
<b>OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)</b>													
		Holleck, Summary Abstract: Wear Resistant Carbide-Boride Composite Coatings, J. Vac. Sci. Technol. A 3(6), Nov/Dec 1985 pp. 2345-2347											
		Holleck, Material Selection for Hard Coatings, J. Vac. Sci. Technol. A 4(6), Nov/Dec 1986 pp. 2661-2669											
		Holleck, Multilayer Coatings - Influence of Fabrication Parameters on Constitution and Properties, Surface and Coatings Technology, 41 (1990) pp. 179-190											
		Holleck et al., Significance of Phase Boundaries in Wear Resistant TiC/TiB <sub>2</sub> Materials High Tech Ceramics, Elsevier Science Publishers B.V., Amsterdam 1987 pp. 2609-2622											
		English abstract of JP 7018416 A2 to Atsuo											
		English abstract of JP 052106 A2 to Shinichi											
<b>EXAMINER</b>							<b>DATE CONSIDERED</b>						
<b>EXAMINER:</b> Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.													



**FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE**
**INFORMATION DISCLOSURE STATEMENT  
STATEMENT BY APPLICANT**

(Use several sheets if necessary)

**ATTY. DOCKET NO.  
K-1782D**
**SERIAL NO.  
(to be assigned)**
**APPLICANT(S)  
RONALD M. PENICH et al.**
**FILING DATE  
August 5, 2003**
**GROUP  
Art Unit (to be assigned)**
**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER							DATE	NAME	CLAS S	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	5	9	7	8	2	0	7	11/1999	Anderson et al.	361	311	
	AB	6	1	1	1	6	9	7	08/2000	Merrill et al.	359	497	
	AC	6	3	0	6	2	6	6	10/2001	Metin et al.	204	192.12	
	AD	6	0	5	1	1	1	3	04/2000	Moshlehi, Mehrdad M.	204	192.12	
	AE	5	6	8	7	6	7	9	11/1997	Mullin et al.	123	41.79	
	AF	6	0	4	5	6	6	7	04/2000	Moll, Eberhard	204	192.38	
	AG	5	0	7	1	6	9	3	12/1991	Sue et al.	428	212	
	AH												
	AI												
	AJ												
	AK												

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER							DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
													YES	NO
	AL													
	AM													
	AN													
	AO													
	AP													

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

	AQ		
	AR		
	AS		

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

\* English translation of the abstract